655 South Lincoln Ave San Bernardino Ca. 92408
PHONE Toll Free 877-470-2975
Web address: www.globalwest.net

MNR 253 Negative Roll Installation Instructions
Ford Falcon (and similar applications)
Plus 3 arms have caster built into them so there is a right and left control arm.

Kit Contains:

1 - Template
2 - Assembled control arms
2 - Ball joints
4 - 3/8 x 2 1/2" fine bolts
4 - 3/8" fine stove lock nuts
4 – 3/8" flat washers
1 - Set of instructions
4 - 9/16 stove lock nuts
4 – 9/16 lock washers
4 – 9/16 x 18 x 2-1/2 bolts
4 – 9/16 washers
2 – 3/8 spacer plates (shim)

Tools Required:

Electric drill
Standard drill bit assortment
9/16" drill bit
Wrench set
Socket set
Small bench vise
Coil spring compressor
Tape measure & marking scribe

1. Check the ride height before you begin installing your Negative Roll kit (NR Kit). Make sure that the vehicle is on a **level** surface. Most people measure from the center of the fender to ground. This is not the most accurate measurement but what you are looking for is a reference point. Accurate measurements come off the suspension pickup points. Another suggestion is to make sure the tire pressures are set first before you measure

2. To install your NR kit, you must first remove your stock front shocks, coil springs and upper control arms. Follow the procedures outlined in a Chilton, Mitchell or other manual specific to your car. A spring compressor is necessary to remove or install the front coils. **Note: A compressed coil spring is dangerous, use extreme care when removing, handling or installing these springs**

3. At this point you should have already removed the front shocks, springs and upper arms. It should be mentioned that the procedures outlined in this instruction sheet assume that the spindles are going to be left attached to the lower control arms. Swing the spindle and lower arm out of the way to proceed.
In your kit you will find template that has two 1/2" holes drilled representing the **top** and two 3/16" holes drilled at the **bottom**. From the wheel well side of the car, bolt the

template to the shock tower using two ½ - inch bolts and standard hex nuts. The template bolts in the stock arm location. Position the template so the 3/16 holes are down. Use a 3/16 drill bit and drill the holes through the tower. Remove the template and then continue step drilling the holes until you open the holes up to 9/16.

4. Check the spring saddle that bolts to your original control arm and make sure it is in good standings. The spring saddle is the mount the coil spring indexes on the upper control arm. If the rubber on the spring saddle shaft is cracked and oozing out, you should replace them. They are available from your Ford dealer under part # D7DY-3388-A. If they are still in good condition, proceed as follows:

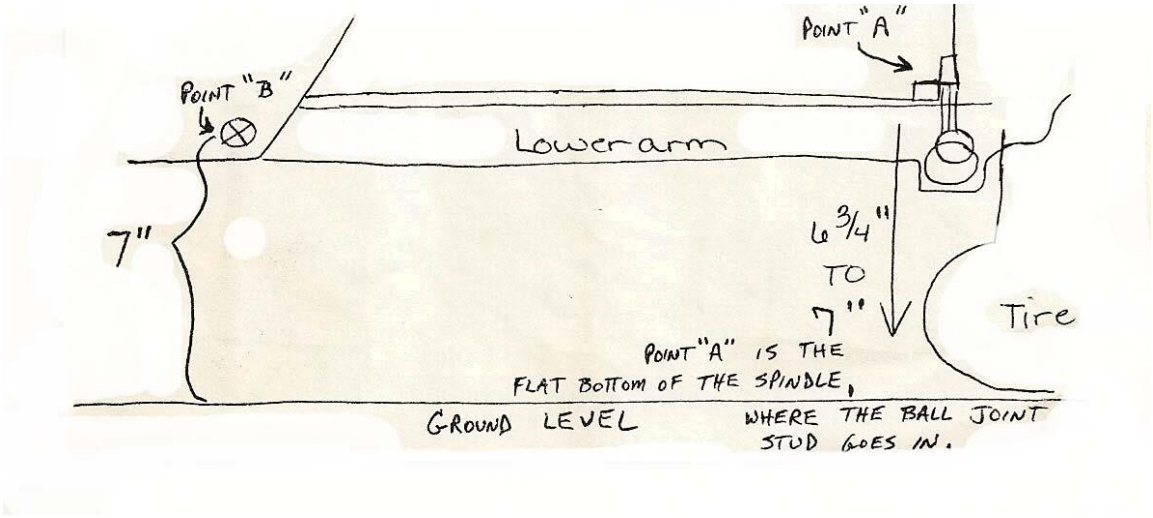
   A. New or old spring saddles. Use a small bench vise and press out the two 3/8" bolts in the spring saddles cross shaft.
   B. If you are using a spring saddle with polyurethane bushings or one that has bearings. You will install the spring saddle on the upper control arm with the spring tang to the inside. This is how the stock saddle was installed. If you are using the stock rubber spring saddle then you will invert the spring saddle so the spring tang is towards the ball joint. This is opposite from the factory installation but is required do to the angle of the control arm at ride height. Use the hardware supplied in the kit (2 – 3/8 x 2-1/2 long bolts --- 2 flat washers and (2) 3/8 lock nuts) and install the spring saddle on the control arm. Tighten the bolts to 25 foot pounds.

5. Install the upper control arm in the shock tower. To install properly looking at the ball joint position in the shock tower, the ball joint will be offset towards the rear of the car. You will have a 3/8" plate that rests between the upper arm cross shaft and the tower. It acts as a shim. Install the arm with shim in the new holes and tighten down the arm to the tower. Use a flat washer, lock washer, and nut on the engine side of the tower. 80 foot pounds.

6. Slip the ball joint into the upper spindle end and torque the ball joint stud to 65 ft/lbs.

7. Install the coil springs next. If it's a street car, you will want to reinstall/replace any spring insulators that were originally present. If it's strictly a race setup, the spring insulators are an option. Compress the coils with your spring compressor and install them so that the flat end is facing up. Rotate the spring to achieve the correct indexing on the lower saddle. The end of the open coil should butt up against the tang on the lower saddle. Do not install the shock just yet. You will want to check ride height first. Complete both sides of the car up to this point before you lower the car down and check ride height.

8. Install the wheels and remove the jack stands. Lower the car on the ground. Before you can successfully measure the car's ride height, **roll the vehicle at least one car length to get the suspension to settle. You should also bounce on the car as you roll it in order to help settle the suspension.** (This is a very important detail!) The



correct ride height is determined by measurements taken from the lower control arm. **Basically we're looking for the lower control arm to be parallel with the ground. The measurement should be within plus or minus ¼ of an inch".** In order to measure this directly, we need to know the distance from point A (Bottom of the spindle) to the ground and the distance from point B (center of the lower control arm bolt to ground). (See diagram) If the inboard measurement (center of the lower control arm bolt to ground) is more than a 1/4" larger than the outboard dimension, you may need to trim the springs. The measurement we are giving is an optimum condition but. If you are looking for the car's ride height to be lower or higher, adjustments can be made. The ride height we are looking for is not set in stone.

Note: Before you undertake cutting your springs, check the following details:

A. Is the spring properly indexed on the saddle and in the top perch?
B. Measure your vehicle's ride height again like you did in step 1. Compare with the measurements from your "old" suspension.
C. Check your rear ride height. If you're your rear springs have sagged too far, this can cause the front to ride high. The NR system is designed to lower ride height 1" from stock. If your ride height has gone up with the installation, it is possible the stock springs have sagged more than one inch.

The car is too high ---- If you find that the car sits too tall and you need to trim a portion of a coil, do not use a torch. Trim the coil with a cut-off wheel or a cold saw. The way the ride height works is as follows – One at the spring is two at the body. The way you figure this is simple – let's say you what to lower the front end 1 inch. Stand the spring up on a table (flat ground down) and take a tape measure and measure the spring free length. This is how tall is the spring is from the table to the top of the spring. Let's say the spring is 12 ½ inches high. If you want to lower the car down one inch, walk the tape measure around the outside of the coil till you measure one half the distance you want to drop the car. 1 inch lower minus 1/2 the distance is ½ an inch. So the measurement you are looking for is 12 inches. That is the cut point of the spring.

Trim the spring and reinstall. At this time the ride height should be set and you car reinstall the shocks.

9. The car will require an alignment.

Alignment Specification

Street settings:		Race settings:	
Left	Right	Left	Right
Caster		Caster	
+3 deg.	+3 1/2 deg.	+3 1/2 deg.	+3 ½ deg
Camber		Camber	
0 deg	0 deg	1-1/4 to 1 -1/2 neg (Both sides)	
Toe in		Toe in	
1/32 in	1/32 in	1/16 in	1/16 in

Note: Race alignment settings vary somewhat with the application.

Always check the clearance between the control arm and the back of the wheel/tire at full steering lock. If the tire or wheel hits, you will have to add material to the steering stops. This situation is fairly rare and occurs mainly with wide wheel widths on small diameter wheels with extreme offsets.